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Stephan Copeland

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EXAMINER

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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte STEPHAN COPELAND

Appeal 2007-4223
Application 10/783,793
Technology Center 3600

Decided: May 29, 2008

Before JENNIFER D. BAHR, DAVID B. WALKER, and STEVEN D.A.
McCARTHY, *Administrative Patent Judges*.

BAHR, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Stephan Copeland (Appellant) appeals under 35 U.S.C. § 134 from the Examiner's decision rejecting claims 1, 2, 7-11, and 13. The Examiner has objected to claims 3-6 and 12 as being dependent on a rejected base

claim but has indicated that they are otherwise allowable.¹ We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellant's claimed invention is directed to mechanical arms for holding objects such as lamps, computer screens, laboratory instruments, and the like, and in particular, to mechanical arms using springs as counterbalances to aid in holding the weight of the object held by the arm as the arm is manipulated to different configurations (Specification 1, ¶ [02]).

Claim 1, the only independent claim involved in this appeal, reads as follows:

1. A mechanical arm comprising:
 - a base;
 - a first linkage pivotally attached to said base at a first pivot;
 - a second linkage pivotally attached to said first linkage at a second pivot;
 - a first spring attached between an anchor point defined on said first linkage and said first pivot; and
 - a second spring attached between an anchor point defined on said second linkage and said second pivot.

¹ The Examiner inexplicably rejects claims 8-10 and claims 11 and 13, which depend either directly or indirectly from claim 4, under 35 U.S.C. §§ 102(b) and 103(a), respectively.

The Rejections

The following rejections are before us for review.

Claims 1, 2, and 7-10 stand rejected under 35 U.S.C. § 102(b) as anticipated by Sträter (US 4,682,749, issued July 28, 1987).

Claim 11 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sträter in view of Vlasak (US 5,108,061, issued April 28, 1992), Souder (US 4,447,031, issued May 8, 1984), or Spadea (US 6,550,734 B1, issued April 22, 2003).

Claim 13 stands rejected under 35 U.S.C. § 103(a) as unpatentable over Sträter.

The Examiner provides reasoning in support of the rejections in the Answer, mailed May 23, 2007. Appellant presents opposing arguments in the Appeal Brief, filed October 26, 2006, and Reply Brief, filed February 27, 2007. Appellant's representative presented oral argument on May 15, 2008.

OPINION

The Anticipation Rejection

To establish anticipation, every element and limitation of the claimed invention must be found in a single prior art reference, arranged as in the claim. *Karsten Mfg. Corp. v. Cleveland Golf Co.*, 242 F.3d 1376, 1383 (Fed. Cir. 2001).

In interpreting claim language, we apply the broadest reasonable meaning of the words in their ordinary usage as they would be understood by one of ordinary skill in the art, taking into account whatever enlightenment by way of definitions or otherwise that may be afforded by the written description. *See In re Morris*, 127 F.3d 1048, 1054 (Fed. Cir.

1997). *See also In re Am. Acad. of Sci. Tech. Ctr.*, 367 F.3d 1359, 1364 (Fed. Cir. 2004).

At issue in this appeal is whether Sträter satisfies the limitation in independent claim 1 of “a first spring ***attached*** between an anchor point defined on said first linkage and said first pivot” (emphasis added). Appellant contends that Sträter’s first spring (25) is attached neither to the first linkage (5) nor to the first pivot point (8). Appeal Br. 6. The Examiner contends that Sträter’s springs are “indirectly attached to the linkages and the pivot points through rod segments 26 and 27 and a lever 23, which are directly attached to the fixed support 30 and the pivot joints via the brake shoe 19, respectively.” Answer 5.

The term “attach” is ordinarily understood to mean “to fasten by sticking, tying, etc.” *Webster's New World Dictionary* 89 (David B. Guralnik ed., 2nd Coll. Ed., Simon & Schuster, Inc. 1984). Appellant describes the attachment of spring 13 at one end to upper link 3 at anchor point 14 and at the other end to cable 20, which is wrapped around ring 7 and attached thereto by pin 21 (Specification 5-6, ¶ [20]; fig. 3a) and the attachment of spring 15 at one end to lower link 2 at anchor point 17 and at the other end to ring 8 in the same manner as the attachment of spring 13 to ring 7² (Specification 6, ¶ [22]). Appellant also describes an alternative embodiment wherein the other end of spring 13 may be attached to ring 7 via a hole defined in the outer circumference of ring 7 (Specification 6, ¶ [21]). Ring 8 is fixed in place by pin 10 inserted in hole 18 defined in base 1, while ring 7 is allowed to rotate around axle 6 in response to movement of

² Appellant’s Specification ostensibly inadvertently reverses rings 7 and 8 in the discussion in Paragraph [22].

lower link 2 about pivot point A (Specification 5, ¶ [19]; Specification 6, ¶ [24]). Appellant's Specification gives no indication that the term "attached" is used in any manner inconsistent with its ordinary usage as fastened by sticking, tying, etc.

Sträter's coil compression springs 25 are slated on twin segmented guide rods comprising telescoping guide rod segments 26 and 27 and braced in a partially compressed or prestressed condition on shoulders provided at both ends of the guide rod on guide rod segments 26 and 27 (col. 6, ll. 29-35). Based on this description, Sträter's coil compression springs 25 do not appear to be attached, in the sense of being fastened or affixed, to anything. Moreover, even if spring 25 were considered to be attached to rod segments 26 and 27, as the Examiner contends, and indirectly to turning levers 23 and spreading members 21, Sträter's spreading members 21 are *not* attached to brake shoes 19, as the Examiner seems to contend. Rather, as illustrated in Figures 3 and 4, spreading members 21 are pivotally mounted and supported in arm segment 5 (col. 5, ll. 59-68) and must be free to rotate or pivot relative to brake shoes 19 so as to selectively either cause radial expansion of brake shoes 19 to lock the pivot joint 8 or 9 against rotation (fig. 3) or to permit brake shoes 19 to contract inwardly radially to permit rotation (fig. 4) (col. 6, ll. 1-12, 45-56).

In light of the above, we conclude that Sträter does not satisfy the limitation in claim 1 of "a first spring ***attached*** between an anchor point defined on said first linkage and said first pivot" and thus does not anticipate the subject matter of claim 1, or claims 2 and 7-10 depending from claim 1. We do not sustain the rejection of claims 1, 2, and 7-10 as anticipated by Sträter.

The Obviousness Rejections

The Examiner's rejections of claim 11 as unpatentable over Sträter in view of Vlasak, Souder, or Spadea and claim 13 as unpatentable over Sträter are grounded in part on the Examiner's flawed determination that Sträter's spring 25 is attached between an anchor point defined on said first linkage (arm 5) and said first pivot. Accordingly, these rejections likewise cannot be sustained.

DECISION

The decision of the Examiner to reject claims 1, 2, 7-11, and 13 is reversed.

REVERSED

JRG

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